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ABSTRACT

Two hundred forty college undergraduates participated in a study of the effect of camera angle on an audience's perceptual judgments of source credibility, dominance, attraction, and homophily. The subjects were divided into four groups and each group was shown a videotape presentation in which sources had been videotaped according to one of four camera-angle treatments: high, eye-level, low, and exaggerated low. After viewing the presentation, the subjects completed questionnaires designed to measure source credibility, dominance, attraction, and homophily. The results indicated that camera angle does affect receiver perceptions of sources. Specifically, the findings suggested that high camera angles produce more submissive evaluations of sources while low angles provide more positive evaluations. Perceptions of dominance, however, did not adversely affect a source's credibility or attraction.
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THE EFFECT OF MEDIATED CAMERA ANGLE ON RECEIVER EVALUATIONS
OF SOURCE CREDIBILITY, DOMINANCE, ATTRACTION AND HOMOPHILY

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ABSTRACT

This paper presents a study designed to test the effect of camera angle on receiver perceptions of source credibility, dominance, attraction, and homophily. Because prior research findings were contradictory, nondirectional hypotheses were formulated. The results indicate that camera angle does effect receiver perceptions of sources. More specifically, the analyses suggest that high camera angles produce more submissive evaluations of sources, whereas, low camera angles produce more positive evaluations of sources.

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INTRODUCTION

In mass communication there exists a distinct move toward the use of more effective methods of producing the media message. This is especially applicable to the field of television broadcasting and film. Borrowing from interpersonal communication research, media researchers have found that different source characteristics are perceived by a receiver depending on how both verbal and nonverbal messages and/or presentation elements are manipulated. McCain and Divers (1973) propose that receivers (television viewers) of mass communication messages use interpersonal communication criteria in their responses and evaluations of media sources. If individuals do respond to mediated sources and messages in much the same way as they respond to interpersonal encounters, then a nonverbal message element such as camera angle should effect the way they perceive the source of a message.

Tannenbaum and Fosdick (1964) illustrated the importance of certain nonverbal media message variables when they stated:

...There are objective built in elements (camera angle, lighting, juxtaposition, contexts, relative size, etc.) which form part of the basis along which pictures are perceived. We are not always aware of the existence of these more subtle elements...Manipulation of these elements can, therefore, lead to changes of perception (meaning) with relatively little awareness of manipulation. (p.253)

Since a mediated source's effectiveness depends on how he/she is perceived by the audience, and since camera angle can be a determining nonverbal factor which can lead to differential perceptions, the nature of the relationship between camera angle and perceptions of a mediated source should be more closely studied.

The purpose of this study, therefore, was to test through experimental means, the effects that different levels of vertical camera angle have on an audiences' perceptual judgements of a mediated source's credibility, dominance, homophily, and attraction.

REVIEW OF THE LITERATURE

FILM THEORY AND CAMERA ANGLE

Film makers have long been concerned with the varying effects of camera angle. An early Russian film maker Arnheim (1957), expressed it the following way:

The domineering forcefulness of a character is often expressed by taking the shot from the worm's eye view. An iron captain in industry or a general...the camera looks at him as at a mountain. Here again the fact that the actor has to be taken from some particular point of view is not handled perfunctorily but is consciously exploited: the perspective angle acquires meaning, a virtue is made of necessity. (p.38)

Gaskill and Englander (1960) in addition, discuss the relationship between camera angle and power when they state:

...your high angle creates a certain feeling of superiority in the audience. It looks down on Junior(subject). His size is foreshortened, he appears earthbound, his actions seem insignificant. But when the next shot shows Junior from a low angle looking up,... Junior gains stature, he commands attention, there is drama and action (excitement) in his actions. (p.53)

Also, along the same lines of power and dominance, Kracauer (1960) suggests the underlying reasons for Hitler's perceived dominance in German propaganda films.

It is not without symbolic meaning that the features of Hitler often appear before clouds...the Reich's eagle frequently detailed in the film, always appears against the sky with Hitler himself...a symbol of superior power used as a means of manipulation. (p.302).

Lindgren (1968) also proposed the same general idea concerning camera angle in dramatic pictures.

If the camera is raised above eye-level so that it looks down on the subject it will produce a picture in which the subject appears dwarfed and diminished in importance; contrariwise, if placed below eye-level and directed upwards, the size and importance of the subject will appear exaggerated. (p.118)

Camera angle is manipulated in an effort to create feelings of involvement. In the film makers mind, he is trying to let the audience experience what an actor or source is portraying. Huss and Silverstein (1968) relate this attitude.

Marnau in The Last Laugh has his camera "look up" at the old doorman's good fortune by means of low camera angle shots, and later makes it "look down" at his misery with high angle ones. He is not only enhancing the tragic reversal, but is imposing upon us--perhaps without our awareness or conscious consent--attitudes of reverence, condenscension, and social judgement of a sort. (p.111)

In these examples from film, it appears that there is consensus among film makers about the effect of camera angle on receiver perceptions. An examination of techniques used by television directors, suggests that there are many similarities among the techniques employed. Bretz (1962), for example, states that:

...if one looks up at an object (such as a statue high in a pedestal), it takes on a greater importance than the viewer. We feel as if we are figureatively as well as actually "looking up" to it. Conversely, if the camera shoots down on someone, he is less important than we are. (p.32).

As in film, this is what has become known as the "principle of dominance." Stasheff and Bretz (1968), in their book concerning the direction and production of the television program, discuss certain ways to achieve pictorial composition. In their discussion of technique they state that, "a higher position on the screen may also carry a feeling of dominance, no matter what the relative size may be" (p.104). They explain that the way to achieve such an effect is to lower the camera from the normal eye-level position.

Millerson (1972) also discusses the role of camera angle and the "principle of dominance". Millerson explains that attitude differences which are produced in audience members can be attributed to certain camera angles. With regard to the three basic types of shots (e.g. level, low angle, and elevated shots), he suggests the attitudinal effects. He contends that the level shot (usually +10° of chest height) produces or contains no special significance. In the low angle condition (usually 20° - 40° below the level shot), however, he contends the subject will appear to have a stronger, more dominant appearance. In the very low angle shot (50° - 60° below the level shot), the subject will appear distorted and possibly even mystical in appearance, and in the high angle condition (20° - 40° above the level shot), the source will seem unimportant and inferior. Finally, in the very high condition (50° - 60° above the level shot) he suggests there is even more of an audience feeling of inferiority toward the subject (p.235).

Despite the relatively consistent positions of film theorists, the effects of camera angle and source perceptions have not been subjected to extensive study. As a result, film theorists as well as film and television directors, have little or no empirical evidence for the assumptions upon which they base camera manipulation. According to McCain, Chilberg and Wakshlag (1977), mass communication research has mainly dealt with the effects of the verbal or cognitive "content" of mass media messages. "We consequently know precious little about the effects of the nonverbal or visual aspects of messages on human behavior" (p.1). There have been however some studies that have been concerned with camera angle. One area is the perceived credibility of the source.

CREDIBILITY AND CAMERA ANGLE RESEARCH

Tiemens (1970) conducted a pioneering study which explored the relationship between camera angle and the credibility of newscasters. Three camera angle perspectives were used: High, straight-on and low. Tiemens described the credibility of the source "...perceived characteristics of the communicator which influence the acceptance of the message" (p.484). The dimensions of credibility measured were "activity" and "potency" (Osgood, Suci, and Tannenbaum, 1957) and "expertness" and "trustworthiness" (Hovland, Janis and Kelley, 1953). Except for only one speaker, on the "activity" dimension, the results indicated no significant differences. There were, however, design problems which may have obscured the results. Not only was the content of the treatment message not held constant, but also there were three different newscasters used. Tiemens concluded that "the limited evidence of this study suggests that the hypothesized relationship between camera angle and communicator credibility cannot be accepted without qualification" (p. 490).

Chilberg (1972), using twenty treatment conditions, attempted to determine the effect of vertical camera angle on source credibility. Two male and female graduate students presented messages. Each source was video-taped in five camera angle treatments (high and low exaggerated, high and low subtle and criterion). Image size was held constant at a medium shot. Source credibility was measured on the following dimensions: sociability, dynamism, competence and composure (McCroskey, Scott, and Young, 1971). Interestingly, the results indicated that higher camera angles produced significantly higher ratings of mediated source credibility.

Wakshlag (1973) also studied camera angle as it related to source credibility. He, however, employed not only camera angle (high, criterion, and low) but also image size. The message format used in this study was a newscast. Two broadcasting students were video-taped presenting the same newscast. McCroskey, Scott and Young's (1971) semantic differential scales for peer and media credibility were administered to 307 undergraduate subjects divided among sixteen conditions (four angles, by two image sizes across two newscasters). The results indicated partial support for the earlier finding that higher camera angles tend to produce higher ratings of mediated source credibility.

In yet another study, McCain and Rowand (1973) undertook a project to study the effect of camera treatment on a political speaker's credibility. During the 1972 Democratic National Convention in Miami Beach, the speeches of George McGovern and Ted Kennedy were simultaneously video-taped as they were broadcast by the three major television networks (NBC, CBS, ABC). Four visual variables were analyzed. They were severity of camera angle, camera angle, image size, and length of shot. One of six treatment conditions was presented to a group of undergraduate students. Twelve semantic differential scales were used to measure four dimensions of source credibility (McCroskey, Jensen, and Todd, 1972). The only result which proved significant between the six network treatments was that Kennedy's extroversion was significantly lower for subjects who viewed CBS rather than NBC. The authors concluded "the only knowledge claim that can be made is that network camera treatments appear to affect some political figures' extroversion differentially" (p.7).

The most recent effort concerning the effect of vertical camera angle on the perceived credibility of a televised speaker was conducted by Avery and Long (1976). They reasoned that since the previous research suffered from conflicting results, a non-directional null hypothesis was necessary. Their hypothesis was: There is no significant difference between the perceived credibility of a televised speaker when viewed from a high as opposed to a low camera angle (p. 3). Two versions of a male speaker (televised) were video-taped. High and low camera angle treatments were used. The image size was kept at a constant medium shot. A total of 176 undergraduate students were randomly assigned to view the two treatment conditions (high or low). After viewing the presentation, the subjects filled out a questionnaire containing semantic differential scales to measure credibility of mass media sources (McCroskey, Jensen, and Valencia, 1973). These results indicated that the "high camera angle resulted in the perception of more positive social qualities" (p. 9). A conclusion drawn by Avery and Long (1976) seems to best describe the knowledge which can be summarized from the camera angle and source credibility research: "Our understanding of the relationship between camera angle and viewers' perceptions of a speaker's multidimensional televised image remains extremely limited" (p. 10).

DOMINANCE AND CAMERA ANGLE RESEARCH

Although film theorists have long relied on certain techniques in order to create dominant feelings in the receiver (audience), only one study to date has been conducted which has even partially explored the relationship of camera angle and perceived dominance of a mediated source. Most research concerning camera angle has taken for granted that low camera angles induce receiver perceptions of source dominance.

Mandell and Shaw (1973) conducted a study in which they explored the effects of camera angle and bodily activity. The study dealt specifically with viewer judgements of "potency", "evaluation", and "activity". The semantic differential scales used to measure "potency" appear to tap perceived dominance. As in previous camera angle research, the newscast format was used. Three camera conditions (high, medium (Criterion) and low) were manipulated. The results indicated that there was an effect for camera angle variation on evaluations of "potency". The authors explain, "In each case as the angle moved from high through medium to low, the ratings of the model improved..." (p. 359).

Speculation concerning the relationship between receiver perceptions of source credibility and dominance remains unsolved. As McCain, Chilberg and Wakshlag (1977) suggest, "clearly the relationship between power, dominance and credibility demands further investigation" (p. 15) while speculation of certain relationships have been posed in the absence of studies which have controlled and empirically studied these variables together, conclusions or recommendations would be premature.

ATTRACTION AND CAMERA ANGLE RESEARCH

Interpersonal and media attraction has been found to be a multidimensional construct. According to McCroskey, Larson and Knapp (1971), attraction relates to "judgements about whether we 'like' another person, whether we 'feel good' in his presence, etc." (p. 38). Based on prior research dealing with the attraction concept, McCroskey and McCain (1972) isolated three dimensions which were characteristic of both interpersonal and media attraction. They were task, social and physical attraction. McCroskey and McCain (1972) have also developed a set of Likert-type scales which have been found reliable in the measurement of perceptions of a mediated source's attraction.

Wakslag (1973) as part of a study which included source credibility, explored the relationship between camera angle (low, criterion, and high) and receiver judgements concerning the attractiveness of a mediated source. Mediated interpersonal attraction was measured using social, task, and physical attraction items developed by McCroskey and McCain (1972) and McCain and Repensky (1972). Newscasters were video-taped presenting a newscast composed of U.P.I. news items. The tapes were then presented to undergraduate students. The results indicated partial support concerning camera angle and attraction. "The task attractiveness of the newscaster ...was greater in high appearing camera angle conditions" (McCain, Chilberg, and Wakshlag, 1977, p.13). This one study appears to be the only effort which has empirically linked vertical camera angle to mediated attraction. The results, as indicated above, are not conclusive, although it seems logical to assume that if an individual is perceived positively along certain credibility dimensions (such as sociability), that he/she would also be perceived to have social attractiveness.

HOMOPHILY RESEARCH

Homophily is a concept which has never been studied in relation to camera angle. Homophily, according to Rogers and Shoemaker, is "...the degree to which individuals who interact are similar in certain attributes" (p.14). Previous research concerning homophily has utilized scales developed by McCroskey, Richmond and Daly (1974). These scales measure perceived interpersonal homophily on four dimensions: attitude, value, appearance, and background. Homophily is an important variable in not only interpersonal communication but also in the diffusion of information as well. This necessarily includes media presentation and homophily's relationship to such non-verbal elements such as camera angle seems to make intuitive sense. However, in the absence of empirical verification, one can only speculate as to its importance.

RATIONALE

Television and film theorists have generated certain knowledge claims concerning how different camera angles affect the perceptions of receivers toward a mediated source. Moreover, empirical research has been conducted that has tested the relationship between nonverbal, visual message variables (camera angle) and receiver perceptions of certain mediated source characteristics. Those perceptions include credibility, attraction, and dominance. Although the source characteristic of homophily has never been studied, it seems to be well suited for investigation. Because problems have arisen in obtaining meaningful results from much of the previous research, it appears evident that in order to gain a truly total picture of the relationship regarding perceptions of the source, all measurable source perceptions (e.g. credibility, attraction, homophily and dominance) should be included in a research design. That was the purpose of the present study. Since all of the source perceptions have never been studied together by previous researchers and since previous analysis has utilized univariate rather than multivariate analysis, non-directional hypotheses were generated for this study. Thus, on the basis of the previous theory and research, the following hypotheses were formulated.

HYPOTHESES

Variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of a mediated source such that:

- H₁) Variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of mediated source credibility variables.
- H₂) Variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of mediated source attraction variables.

- H₃) Variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of mediated source dominance.
- H₄) Variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of mediated source homophily variables.

METHODS AND PROCEDURES

OPERATIONAL DEFINITIONS

INDEPENDENT VARIABLE: FOUR LEVELS OF CAMERA ANGLE

Based on previous research, four camera angles were used. They were high, criterion, low and exaggerated low. Camera angle is the degree to which a camera lens will vary on a vertical plane of 180 degrees from a criterion (eye-level) shot. The criterion shot should be parallel to the mediated source's eye level. The criterion shot (to be referred to as Treatment or TM2) should form a perpendicular (90 degree) angle with the vertical plane. The high camera angle (TM1) was placed 24 inches above the criterion shot. This created a 14° angle above the perpendicular eye-level axis. The low camera angle (TM3) was placed 24 inches below the criterion shot. This created a 14° angle below the perpendicular eye-level axis. The exaggerated low angle (TM4) was placed 32 inches below the criterion shot. This created an 18° angle below the perpendicular eye-level axis. The distance from the camera to the subject was kept at approximately 8 feet. For the experimental treatment conditions, the image size remained constant. It consisted of a medium shot - from approximately the waist up.

DEPENDENT VARIABLES: DIMENSIONS OF MEDIA CREDIBILITY

Mediated source credibility is defined as the receiver's perception toward a mass media source on five dimensions of credibility: competence, extroversion, composure, sociability, and character. These were measured by McCroskey, Jensen and Valencia's (1973) scales for measurement of media credibility.

DEPENDENT VARIABLE: DOMINANCE

Mediated interpersonal dominance was defined as the receiver's perceptions of a mediated source as measured using two dominance scales. The two scales employed in this investigation are those reported by Mandell and Shaw (1973) and Mehrabian (1972).

DEPENDENT VARIABLES: DIMENSIONS OF MEDIATED INTERPERSONAL ATTRACTION

Mediated interpersonal attraction is defined as the degree to which a receiver perceives a mediated source along the three dimensions of attraction: physical, task, and social. These were measured by McCroskey and McCain's (1972) measurement of interpersonal attraction.

DEPENDENT VARIABLES: DIMENSIONS OF HOMOPHILY

Mediated interpersonal homophily is defined as the receiver's perceptions of a mediated source on four dimensions of interpersonal homophily: attitude, appearance, background, and value. These were measured using McCroskey, Richmond and Daly's (1974) scales for the measurement of perceived homophily.

PROCEDURES

MEDIATED SOURCE

An individual with broadcasting experience was selected to present the content of the mediated message. The source was dressed much like newscasters, interviewers, and hosts for talk-shows might be dressed. The individual (a male) was dressed in a suitcoat and tie, and presented the message while standing in front of a neutral television studio backdrop.

MESSAGE

The message was a "feature" type informational message concerning the historical foundations and development of _____ University. The message was intentionally developed to present an objective neutral viewpoint. The presentation (message) took approximately five minutes to orally present.

The presentation was staged in the studios of _____ VU Television, Channel 24. This is the _____ University Public Broadcasting Station. The video-taping was done using one Sylvania and one Dage black/white studio camera. The video-tape recorders used were a Sony VO1600 U-matic and an Ampex VR7800. Three-quarter inch video-cassette tape was used for all conditions. The mediated source was simultaneously recorded in two of the camera angle conditions at a time. Image size was kept constant throughout all conditions at a medium shot. The tapings resulted in four conditions, four camera angle treatments using one source.

SUBJECTS

Subjects (Ss) were students enrolled in sections of an introductory Speech Communication course at _____ University during the spring semester of 1977. Each section had approximately 25 students. A total of 240 subjects were utilized. Subjects were randomly assigned to one of four treatment conditions. This provided 60 subjects per treatment condition. The assignment of treatment conditions to groups was random. Through this procedure, maximization of randomization was accomplished. Students were predominately freshmen and sophomores.

DATA COLLECTION

The experimenter administered the treatment conditions to all the subjects in a classroom setting. The experiment was introduced to the subjects as a possible addition to the _____ VU programming schedule. The subjects, since they were participating in a "Communication in the Public Context" class, were asked to view the presentation. The video-tape was then played for the group to view. After viewing the presentation, the subjects were supplied with questionnaires which contained the scales designed to measure credibility, homophily, attraction, and dominance. It was explained that the subject's honest and constructive input, in the form of evaluating the presentation, was desired by the _____ VU programming committee. They were then asked to fill out the questionnaire booklet. This entire procedure took approximately 20 - 25 minutes. After the entire project was completed, the subjects were completely debriefed concerning the project and their role in it.

STATISTICAL DESIGN

MULTIVARIATE ANALYSIS OF VARIANCE

The data was reflected for consistent direction and processed using SAS computer assistance. When reflecting the direction of the item, they were reflected so that the lowest mean would be representative of the concept. In other words, a low mean indicates, for example, the most dominance, while a high mean will indicate less dominance. A Multivariate Analysis of Variance (to be referred to as MANOVA) designed was used, due to multiple dependent variables, to determine if the camera angle treatment conditions produced differences. The .05 level of significance was used for all tests. A Scheffee's test was employed in order to test the main effects of camera angle on credibility, attraction, homophily and dominance in the individual treatment conditions. Also, univariate Regression ANOVA's were used to interpret the main effects of each of the dependent variables individually.

RESULTS

RELIABILITY OF INSTRUMENTS

Prior to analysis, a Nunnally reliability correlation coefficient was computed for each of the dependent variables which were analyzed. The variable and their reliabilities were: Competence ($r=.82$), Extroversion ($r=.78$), Composure ($r=.86$), Sociability ($r=.82$), Character ($r=.69$), Task Attraction ($r=.82$), Social Attraction ($r=.76$), Physical Attraction ($r=.86$), Attitude Homophily ($r=.77$), Value Homophily ($r=.43$), Appearance Homophily ($r=.64$), Background Homophily ($r=.80$), and Dominance ($r=.84$).

ALL DEPENDENT VARIABLES: FOUR TREATMENT CONDITION

A MANOVA was performed which included all four treatment conditions and all thirteen dependent variables to test the generalized research hypothesis that variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of a mediated source. The results of the MANOVA indicated the extraction of three characteristic roots. The first characteristic root was significant according to Pillai's Trace ($F=2.17$, $df=39$ and 516 , $p=.0002$) and accounted for 20.13% of the variance. For the overall model, a significant Wilk's Criterion ($F=2.20$, $df=39$, and 504 , $p=.0002$) yielded 37.15% of the accountable variance. The redundancy index indicated the average percentage of the characteristic root variance explained by the correlations was 15%. For the first characteristic root, variate correlations were: Competence ($r=.64$), Extroversion ($r=.67$), Composure ($r=.42$), Sociability ($r=.58$), Character ($r=.20$), Task Attraction ($r=.46$), Social Attraction ($r=.24$), Physical Attraction ($r=.14$), Attitude Homophily ($r=.08$), Value Homophily ($r=.21$), Appearance Homophily ($r=-.30$), Background Homophily ($r=-.03$), and Dominance ($r=.40$). The following scoring procedure was used in calculating the error term which utilized the normalized characteristic vector: $SCORE = (comp* .0021) + (extro* .0071) + (calm* .0021) + (soc* .0137) + (char* -.0132) + (taskat* .0071) + (socat* -.0028) + (phyat* -.0026) + (attho* .0010) + (valho* .0120) + (appho* -.0065) + (bckho* -.0030) + (dom* .0009)$. The mean square error term resulting from this procedure was .0054. This value was placed into a Scheffee's test to test the individual cell differences. The individual treatment cells were as follows: TM1: $n=59$, $\bar{X}=.2806$; TM2: $n=55$, $\bar{X}=.2101$; TM3: $n=38$, $\bar{X}=.1793$; TM4: $n=34$, $\bar{X}=.2141$. The results of the Scheffee's are included in Table 1.

CREDIBILITY

In testing the first hypothesis that states that variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of a mediated source credibility variables, the results of the MANOVA extracted three characteristic roots. The first characteristic root was significant according to Pillai's Trace procedure ($F=3.11$, $df=15$ and 540 , $p=.0002$) and accounted for 15.98% of the variance. A significant overall model, according to Wilk's Criterion procedure ($F=3.19$, $df=15$ and 491 , $p=.0001$) accounted for 22.60% of the accountable variance. For the first characteristic root, variate correlations were: Competence ($r=.78$), Extroversion ($r=.80$), Composure ($r=.45$), Sociability ($r=.71$), Character ($r=.25$). Utilizing the redundancy index, the average percentage of the characteristic root variance explained by the correlations was 40%. The following scoring method was used in calculating the error term which utilized the normalized characteristic vector. $SCORE = (comp* .0045) + (extro* .0105) + (calm* -.0005) + (soc* .0121) + (char* -.0072)$. The mean square error term resulting from this procedure was .0055. This term was placed into a Scheffee's test procedure to test the individual cells for differences. The means were as follows: TM1 = .4061, TM2 = .3516, TM3 = .3216, TM4 = .3430. The results of the Scheffee's tests are presented in Table 2.

ATTRACTION

Results of the MANOVA testing the second hypothesis that variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of a mediated source attraction variables, extracted three characteristic roots. The first characteristic root was significant according to Pillai's Trace ($F=2.45$, $df=9$ and 546 , $p=.01$), and accounted for 5.70% of the variance. Wilk's Criterion, for the overall model, indicated significance ($F=2.46$, $df=9$ and 438 , $p=.01$) accounting for 11.31% of the accountable variance. For the first characteristic root, variate correlations were: Task Attraction ($r=.01$), Social Attraction ($r=.73$), and Physical Attraction ($r=.76$). Utilizing the redundancy index, the average percentage of the characteristic root variance explained by the correlations was 37%. The following scoring procedure was used in calculating the error term: $SCORE = (taskat* -.0118) + (socat* .0110) + (phyat* .0064)$. The mean square error term was .0055. The Scheffee's tests were used to determine cell differences. The cell means were as follows: $TM1 = .1643$, $TM2 = .1835$, $TM3 = .1516$, $TM4 = .2050$. The results of the Scheffee's test are presented in Table 3.

DOMINANCE

Since dominance was unidimensional, the third hypothesis which stated that variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of a mediated source's dominance, was tested using a Regression Analysis of Variance. Results of this procedure yielded significance at a probability = .01 level. These results are included in Table 4.

Scheffee's tests were also employed to locate differences in cell conditions. However, in computing these tests, although a significant overall effect was obtained, none of the individual cell comparisons resulted in significance. Because of the conservative nature of the Scheffee's test, the alpha level was examined at both .10 and .25. Table 5 includes the information concerning the Scheffee's tests for Dominance. The treatment means were as follows: $TM1 = 44.42$, $TM2 = 40.64$, $TM3 = 40.50$, $TM4 = 43.88$.

HOMOPHILY

A MANOVA to test the fourth hypothesis that variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of mediated source homophily variables, resulted in the extraction of three characteristic roots. The first characteristic root was significant utilizing Pillai's Trace ($F=1.85$, $df=12$ and 543 , $p=.04$) and accounted for 9.08% of the variance. Wilk's Criterion yielded a significant overall model ($F=1.87$, $df = 12$ and 473 , $p=.04$) and accounted for 11.55% of the accountable variance. Variate correlations, for the first characteristic root, were Attitude Homophily ($r= -.55$), Value Homophily ($r= -.52$), Appearance Homophily ($r=.52$) and Background Homophily ($r= -.27$). The redundancy index indicated the average percentage of the characteristic root variance explained by the correlations was 23%. The following scoring procedure was used in calculating the error term: $SCORE = (attho* .0101) + (valho* -.0187) + (appho* .0121) + (bckho* .0000)$. The mean square error term resulting from this procedure was .0055. A Scheffee's test was used to examine cell differences. The treatment means were: $TM1 = .2685$, $TM2 = .2570$, $TM3 = .2128$, $TM4 = .2804$. The results of the Scheffee's are in Table 6.

As the above analyses indicate, all of the hypotheses in this study were confirmed. The analysis suggests that variance in vertical camera angle will produce significantly different receiver perceptions of a mediated source's credibility, attraction, dominance, and homophily.

DISCUSSION

This study sought to test the effects that nonverbal mediated camera angle would have on an audience's perceptions of a source's credibility, attraction, dominance, and homophily. In reviewing the literature, partial and nonsignificant effects were found which tend to make this body of research ambiguous at best. Therefore, in order to achieve a more "gestalt" perspective, multivariate analyses were performed. For example, when receivers view a source like Walter Cronkite of CBS news, they view the source, and make perceptions of that source on all of the source perceptions collectively, not independently. For this reason, previous research tends to be lacking in its generalizability. This is very likely the reason for so few consistent results. In fact, when all of the perceptions are studied together, a more natural evaluation is presented. That was the reason for a generalized hypothesis which stated that variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of a mediated source. The results of the MANOVA analyses which included all of the dependent variables proved informative, because, as the analysis suggests, when all dependent variables are analyzed, the results parallel claims suggested by film and television theorists. The significant differences were found to be between the high camera angle/eye-level camera angle, low camera angle, and exaggerated low camera angle conditions.

Hypothesis one stated that variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of mediated source credibility variables. As the results indicated, this hypothesis was confirmed. Examination of the cell means indicates that there are significant differences in a source's credibility when viewed from high camera angle/eye-level camera angle and from a high camera angle/low camera angle, and when viewed from a high angle/exaggerated low camera angle. The other treatment conditions were non-significant.

Hypothesis two stated that variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of mediated source attraction variables. As the results indicate, this hypothesis was confirmed. Examination of the cell means, however, only indicate one significant difference. This difference lies between the low camera angle and the exaggerated low camera angle.

Hypothesis three stated that variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of a mediated source's dominance. As the Regression Analysis of Variance indicated, this hypothesis was confirmed. However, upon cell comparisons using Scheffee's tests, no significant differences were found at the .05 level. This is probably due to the very conservative nature of the Scheffee's test. In order to lend more explanation to this hypothesis, Scheffee's were examined at both the .10 and .25 level, to see what significant differences may be evident at those alpha levels. Upon performing these Scheffee's tests, differences were found. At the .10 level, differences were found between the high camera angle/eye-level camera angle. Differences were also found between the high camera angle/low camera angle. Further, at the .25 level, differences were found between the eye-level camera angle/exaggerated low camera angle conditions. All of the other differences were non-significant.

Hypothesis four stated that variance in vertical camera angle will produce significantly different means of a linear combination of receiver evaluations of mediated source homophily variables. This hypothesis was also confirmed according to the results. Examination of the cell comparisons indicate, for this study, the differences were found between the high angle/eye-level camera angle condition, and between the low camera angle/exaggerated low camera angle condition. All of the other cell comparisons were non-significant.

The thrust of these results indicate that when all of the source perceptions are taken into account, the best camera angle from which to achieve an overall best perception of a source is the low camera angle (TM3). This finding contrasts previous research in that some earlier research has indicated that the higher angles are best for credibility and attraction. However, when other perceptions are introduced into the analyses, the findings indicate that the previous research is contradicted. Additionally, with regards to the dominance dimension, this research bears out the prior theories of the theorists and film makers. The results indicate that, in fact, the lower camera angles do produce perceptions of dominance in receivers. This is in direct opposition to previous conjecture by camera angle researchers. In this study, dominant perceptions did not adversely effect a source's credibility and/or attraction.

It would appear from this study then, that claims made by previous researchers regarding camera angle were premature. When perceptions are cast in a multivariate model, the earlier theoretical statements of film theorists are borne out. While this study certainly is not the "last" word on camera angle and source perceptions, we think that it provides a better perspective regarding camera angle and source perceptions than has been found in previous research.

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TABLE 1
 SCHEFFEE'S FOR ALL DEPENDENT VARIABLES
 FOUR TREATMENT CONDITION

<u>Treatments</u>	<u>Critical Differences</u>	<u>Mean Differences</u>
1-2	.0391	.0705*
1-3	.0434	.1013*
1-4	.0449	.0665*
2-3	.0440	.0308
2-4	.0455	.0040
3-4	.0493	.0348

*Statistically Significant at .05.

TABLE 2
 SCHEFFEE'S TEST FOR CREDIBILITY

<u>Treatments</u>	<u>Critical Differences</u>	<u>Mean Differences</u>
1-2	.0395	.0545*
1-3	.0438	.0845*
1-4	.0453	.0631*
2-3	.0444	.0300
2-4	.0459	.0086
3-4	.0497	.0214

*Statistically Significant at .05.

TABLE 3
 SCHEFFEE'S TEST FOR ATTRACTION

<u>Treatments</u>	<u>Critical Differences</u>	<u>Mean Differences</u>
1-2	.0395	.0192
1-3	.0438	.0127
1-4	.0453	.0407
2-3	.0444	.0319
2-4	.0459	.0215
3-4	.0497	.0534*

*Statistically Significant at .05.

TABLE 4
ANALYSIS OF VARIANCE FOR DOMINANCE

Source of Variance	SQ	df	XSQ	F
Regression	624.59	3	208.20	3.99*
Error	9490.16	182	52.14	
Corrected Total	10114.76	185		

*Statistically Significant at .05.

TABLE 5
SCHEFFEE'S TEST FOR DOMINANCE

Treatments	Critical Differences	Mean Differences
1-2	3.42 (.10)	3.78**
1-3	3.80 (.10)	3.92**
1-4	3.93 (.10)	.54
2-3	3.85 (.10)	.14
2-4	3.21 (.25)	3.24***
3-4	3.47 (.25)	3.38

**Statistically Significant at .10

***Statistically Significant at .25

TABLE 6
SCHEFFEE'S TEST FOR HOMOPHILY

Treatments	Critical Differences	Mean Differences
1-2	.0395	.0115
1-3	.0430	.0557*
1-4	.0453	.0119
2-3	.0444	.0442
2-4	.0459	.0234
3-4	.0497	.0676*

Statistically Significant at .05.